



## Environmental consciousness and green customer behavior: An examination of motivation crowding effect



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### ABSTRACT

The motivation crowding effect suggests that external money intervention weakens intrinsic motivation. The purpose of this study is to examine whether the motivation crowding effect occurs during the process where consumers try to be environmentally friendly. Thus, this study will first investigate the effect of environmental protection consciousness on green customer behavior, and then investigate the effect that incentive mechanisms have on environmental protection consciousness and green customer behavior. 458 hotel guests are used as research subjects. The results show that environmental protection consciousness positively affects green consumer behavior. Cash discount incentives have no effect on the choice of hotel guests to reuse their bed sheet or towels; on the contrary, environmental protective alternatives are great incentives for hotel guests to maintain environmentally friendly behavior. Regarding the demographics of hotels guests, female and younger guests are more inclined to be environmentally friendly. The contribution of this paper is proof of the existence of motivation crowding through an empirical analysis of hotel guests, which enlightens the hospitality industry on how to introduce environmentally friendly strategies in order to respond to motivation crowding.

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### 1. Introduction

With the rise of environmental consciousness, environmental issues have become valued and mainstream (Chen, 2010). Many firms are concerned with the effectiveness of adopting green marketing strategies and environmental appeals on consumer behavior (Chen and Chai, 2010; Lee, 2009). Many studies on consumer behavior have focused on the environmental issues of hotels (de Grosbois, 2012; Goldstein et al., 2008; Han and Kim, 2010; Lee et al., 2010; Kang et al., 2012; Kim and Han, 2010; Manaktola and Jauhari, 2007; Rahman et al., 2012; Robinot and Giannelloni, 2010). For the hotel industry, which consumes a great amount of water resources and detergents in order to wash and iron essential items such as towels and bed sheets, environmental issues are particularly important. These processes cause hotels to have increased expenditures and carbon emissions. Thus, many hotels place environmental notices in the rooms to call on environmental protection and encourage their clients to reuse bath towels (Krakovsky, 2008).

However, some clients cannot be convinced by the hotels' calls for green consciousness, such as the reuse of towels, not actively offering disposable toiletries or not changing the bed sheets daily. Smart clients know that the reuse of towels can save a great amount of cleaning expenditure for the hotels, and they feel that the environmental appeal is hypocritical (Krakovsky, 2008). Therefore, some hotels attract clients using cash discounts. However, the motivation crowding effect suggests that extrinsic cash interventions lower the level of intrinsic motivation. In other words, incentives reduce the drive for action (Frey, 1997; Frey and Jegen, 2001; Frey and Oberholzer-Gee, 1997). Environmental clients are motivated by their intrinsic support for the environment, and extrinsic motivation (cash discounts) might change their environmental behavior. According to a previous study, many clients will not change their original habits for cash discounts and prefer using new towels (Krakovsky, 2008). Accordingly, behavior that is based on non-cash motivation will be influenced by rewards. In other words, cash crowds out non-cash motivation. For instance, salaries paid by non-profit enterprises are usually lower than the average. However, the employees of these enterprises are active because they believe in their mission. When a reward system (a bonus, upon the percentage of the salary, is given to each donation collected) is practiced, the motivation crowding effect comes to exist, and

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employees of non-profit enterprises begin to neglect work items that are not directly related to these rewards. Frey (1997), Frey and Oberholzer-Gee (1997), and Frey and Jegen (2001) call this phenomenon the motivation crowding effect. Past research has tried to find out how to change clients' habits. For instance, Goldstein et al. (2008) proposed stimulating hotel customers' sense of environmental protection using social norms. In a standard environmental message, hotels simply inform customers in the rooms to "Help save the environment. Please reuse the towels in order to protect the environment. . ." Messages with social norms mean to inform customers who have stayed in the same room to "join your fellow guests in helping to save the environment." According to the said research finding, in comparison to standard environmental messages, messages with social norms are more effective.

Besides information based on social norms, this study intends to investigate other measures that could trigger clients' environmental behavior. There were three research objectives of this study. First, this study probed into the effect of consumers' environmental consciousness on green customer behavior and attempted to find out whether consumers with different kinds of environmental consciousness would have different green customer behaviors. Next, this study validated the motivation crowding effect and the effect and function of incentives. In particular, this study attempted to find out whether the green customer behavior of consumers with environmental consciousness would differ given the use of cash discount incentives. Furthermore, this study explored the moderating role and function of cash discount incentives between environmental consciousness and green customer behavior. Finally, this study attempted to find an incentive mechanism to supplement cash discounts and looked for ways to enhance past studies in order to propose solutions, which in turn would help hotels to save energy and reduce carbon emissions.

The remainder of this paper is organized as follows. Section 2 presents the literature review on environmental consciousness, green customer behavior, the motivation crowding effect and the research hypotheses. Section 3 introduces the research methods, including the conceptual framework, variables, data collection, and analytic models. Empirical analyses include correlation analysis, CFA, validation of the moderating effect of regression analysis, and ANOVA. In the final section, this study presents its conclusion and provides suggestions for future research.

## 2. Theory and hypotheses

### 2.1. Environmental consciousness and green customer behavior

Environmental consciousness refers both to a tendency to mentally reflect on the environment (Robert and Bacon, 1997) and to behavior and psychological states that reflect environmental commitment (e.g. Samdahl and Robertson, 1989; Zimmer et al., 1994). Environmental consciousness is a kind of belief, which refers to an individual's descriptive ideas about certain things and attitudes that reflect that person's consistent evaluation, feeling and tendency toward that thing or concept (e.g. Samdahl and Robertson, 1989; Zimmer et al., 1994). Attitudes are usually considered to be factors that directly influence behavioral intentions or behavior. Beliefs tend to be regarded as key or predisposing factors in the formation of attitudes (Engel et al., 1995; Han and Kim, 2010). In a study on consumer behavior, Vinson et al. (1977) suggest that certain values influence further values concerning consumption and the belief in product attributes. Consumers' values influence their beliefs in product attributes, which affect their attitudes toward these products.

In recent years, due to serious environmental damage and the rise of environmental activities, more consumers have developed

environmental consciousness. Thus, consumer environmentalism has become important (McIntosh, 1991). Some scholars have suggested that consumers' purchase decision-making usually depends on their attitudes toward the environment (Schwepker and Cornwell, 1991). In fact, more and more consumers are concerned about the environment and perceive that they are responsible for the environment and so purchase products that have less impact on the environment (Young et al., 2010; Vandermerwe and Oliff, 1990). In a study on the green consumers' purchases of technology products in the UK, Young et al. (2010) suggest that many consumers try hard to change their purchasing attitudes due to concerns about the environment. Individuals' care about the natural environment reflects their values and has an effect on their behavior (Bansal and Roth, 2000). According to Laroche et al. (2001), consumers' environmental attitudes strongly influence their intention to purchase green products. In a study of the hotel industry, environmental consciousness was found to positively influence green consumption (Han et al., 2010). Kang et al. (2012) suggest that clients with high environmental consciousness will develop the intention to stay in green hotels and will pay more to do so. Moreover, these intentions are higher in clients staying at luxurious hotels than they are for those staying in economic hotels. Thus, this study established the following hypotheses for further validation:

**H1a.** Environmental consciousness positively influences green customer behavior.

**H1b.** Consumers with different kinds of environmental consciousness show significant differences in green customer behavior.

### 2.2. The motivation crowding effect

Frey (1997), Frey and Oberholzer-Gee (1997) and Frey and Jegen (2001) studied the motivation crowding effect and suggested that extrinsic cash interventions lead to lower levels of intrinsic motivation. In other words, incentives crowd out the original drive to action. When the incentive mechanism designed by extrinsic cash tries to trigger internal motivation, it negatively influences intrinsic incentives. This is known as the motivation crowding effect. Cognitive evaluation theory indicates that the incentive effect of internal returns caused by doing certain things will be lowered due to the intervention of external returns (de Charms, 1968; Deci, 1971; Deci and Ryan, 1985; Deci et al., 1999). Kohn (1993) suggests that reward systems based on extrinsic motivators cannot change the attitudes that influence human behavior.

In a study on the motivation crowding effect, Frey and Jegen (2001) suggest that two kinds of psychological processes are central to the effect of extrinsic incentives on intrinsic motivation. The first is self-determination, and the second is self-esteem. External intervention lowers the levels of self-determination and internal motivation. In other words, when individuals' actions are self-determined, internal motivation is enhanced. Small incentives lower internal motivation (Deci, 1975). The reason for this is that by obtaining cash, people no longer perceive the change in action as resulting from intrinsic incentives but rather from extrinsic incentives, and so will be controlled by external intervention. They realize that their behavior is affected by incentives and so their personal evaluation of the action will be lower.

As to self-determination, as suggested by cognitive evaluation theory, an emphasis on extrinsic incentives lowers the level of intrinsic incentives. Extrinsic incentives influence intrinsic incentives because individuals perceive the loss of control of their personal behavior (voluntary behavior is turned into controlled behavior) or their esteemed values are degraded by extrinsic incentives. Thus, some clients protect the environment due to their personal environmental consciousness and green value; however, when small discounts (1 USD) are designed as incentives, clients

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